Mark G Aarts

List of Publications by Year
in descending order

109 papers	10,310 citations	47006 47 h-index	33894 99 g-index
114 all docs	114 docs citations	114 times ranked	10347 citing authors

#	Article	IF	Citations
1	Plant science: the key to preventing slow cadmium poisoning. Trends in Plant Science, 2013, 18, 92-99.	8.8	844
2	The molecular mechanism of zinc and cadmium stress response in plants. Cellular and Molecular Life Sciences, 2012, 69, 3187-3206.	5.4	521
3	Large Expression Differences in Genes for Iron and Zinc Homeostasis, Stress Response, and Lignin Biosynthesis Distinguish Roots of Arabidopsis thaliana and the Related Metal Hyperaccumulator Thlaspi caerulescens. Plant Physiology, 2006, 142, 1127-1147.	4.8	477
4	Intragenic Recombination and Diversifying Selection Contribute to the Evolution of Downy Mildew Resistance at the RPP8 Locus of Arabidopsis. Plant Cell, 1998, 10, 1861-1874.	6.6	453
5	What Has Natural Variation Taught Us about Plant Development, Physiology, and Adaptation?. Plant Cell, 2009, 21, 1877-1896.	6.6	401
6	Molecular characterization of the CER1 gene of arabidopsis involved in epicuticular wax biosynthesis and pollen fertility.. Plant Cell, 1995, 7, 2115-2127.	6.6	390
7	<i>Arabidopsis thaliana</i> transcription factors bZIP19 and bZIP23 regulate the adaptation to zinc deficiency. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 10296-10301.	7.1	334
8	Thlaspi caerulescens , an attractive model species to study heavy metal hyperaccumulation in plants. New Phytologist, 2003, 159, 351-360.	7.3	319
9	Elevated expression of metal transporter genes in three accessions of the metal hyperaccumulator Thlaspi caerulescens. Plant, Cell and Environment, 2001, 24, 217-226.	5.7	313
10	Expression differences for genes involved in lignin, glutathione and sulphate metabolism in response to cadmium in <i>Arabidopsis thaliana</i> and the related Zn/Cdâ€hyperaccumulator <i>Thlaspi caerulescens</i>. Plant, Cell and Environment, 2008, 31, 301-324.	5.7	291
11	The Arabidopsis MALE STERILITY 2 protein shares similarity with reductases in elongation/condensation complexes. Plant Journal, 1997, 12, 615-623.	5.7	268
12	Functional characterization of NRAMP3 and NRAMP4 from the metal hyperaccumulator <i>Thlaspi caerulescens</i>. New Phytologist, 2009, 181, 637-650.	7.3	244
13	The <i>Arabidopsis MALE STERILITY 2 </i>protein shares similarity with reductases in elongation/condensation complexes. Plant Journal, 1997, 12, 615-623.	5.7	239
14	Genotype Ã— environment interaction QTL mapping in plants: lessons from Arabidopsis. Trends in Plant Science, 2014, 19, 390-398.	8.8	237
15	The Impact of the Absence of Aliphatic Glucosinolates on Insect Herbivory in Arabidopsis. PLoS ONE, 2008, 3, e2068.	2.5	223
16	ANTHOCYANINLESS2, a Homeobox Gene Affecting Anthocyanin Distribution and Root Development in Arabidopsis. Plant Cell, 1999, 11, 1217-1226.	6.6	214
17	Transposon tagging of a male sterility gene in Arabidopsis. Nature, 1993, 363, 715-717.	27.8	213
18	Transcriptome dynamics of Arabidopsis during sequential biotic and abiotic stresses. Plant Journal, 2016, 86, 249-267.	5.7	200

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19	Identification of R-Gene Homologous DNA Fragments Genetically Linked to Disease Resistance Loci in <i>Arabidopsis thaliana</i>. Molecular Plant-Microbe Interactions, 1998, 11, 251-258.	2.6	194
20	Natural genetic variation in plant photosynthesis. Trends in Plant Science, 2011, 16, 327-335.	8.8	191
21	Natural variation and QTL analysis for cationic mineral content in seeds of Arabidopsis thaliana. Plant, Cell and Environment, 2004, 27, 828-839.	5.7	155
22	Opportunities and feasibilities for biotechnological improvement of Zn, Cd or Ni tolerance and accumulation in plants. Environmental and Experimental Botany, 2011, 72, 53-63.	4.2	154
23	Genetic architecture of plant stress resistance: multiâ€trait genomeâ€wide association mapping. New Phytologist, 2017, 213, 1346-1362.	7.3	144
24	Progress in the genetic understanding of plant iron and zinc nutrition. Physiologia Plantarum, 2006, 126, 407-417.	5.2	121
25	Arabidopsis STERILE APETALA, a multifunctional gene regulating inflorescence, flower, and ovule development. Genes and Development, 1999, 13, 1002-1014.	5.9	120
26	Molecular Characterization of the CER1 Gene of Arabidopsis Involved in Epicuticular Wax Biosynthesis and Pollen Fertility. Plant Cell, 1995, 7, 2115.	6.6	111
27	Gene Expression Differences between <i>Noccaea caerulescens</i> Ecotypes Help to Identify Candidate Genes for Metal Phytoremediation. Environmental Science & Technology, 2014, 48, 3344-3353.	10.0	106
28	Microspore and pollen development in six male-sterile mutants of Arabidopsis thaliana. Canadian Journal of Botany, 1993, 71, 629-638.	1.1	104
29	QTL analysis of cadmium and zinc accumulation in the heavy metal hyperaccumulator Thlaspi caerulescens. Theoretical and Applied Genetics, 2006, 113, 907-920.	3.6	100
30	Phenomics for photosynthesis, growth and reflectance in Arabidopsis thaliana reveals circadian and long-term fluctuations in heritability. Plant Methods, 2016, 12, 14.	4.3	97
31	Expression of the ZNT1 Zinc Transporter from the Metal Hyperaccumulator Noccaea caerulescens Confers Enhanced Zinc and Cadmium Tolerance and Accumulation to Arabidopsis thaliana. PLoS ONE, 2016, 11, e0149750.	2.5	80
32	Natural Genetic Variation for Acclimation of Photosynthetic Light Use Efficiency to Growth Irradiance in Arabidopsis. Plant Physiology, 2015, 167, 1412-1429.	4.8	78
33	Arabidopsis bZIP19 and bZIP23 act as zinc sensors to control plant zinc status. Nature Plants, 2021, 7, 137-143.	9.3	76
34	A strong effect of growth medium and organ type on the identification of QTLs for phytate and mineral concentrations in three Arabidopsis thaliana RIL populations. Journal of Experimental Botany, 2009, 60, 1409-1425.	4.8	75
35	Converging phenomics and genomics to study natural variation in plant photosynthetic efficiency. Plant Journal, 2019, 97, 112-133.	5.7	75
36	Construction of a genetic linkage map of Thlaspi caerulescens and quantitative trait loci analysis of zinc accumulation. New Phytologist, 2006, 170, 21-32.	7.3	71

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37	The heavy metal hyperaccumulator Thlaspi caerulescens expresses many speciesâ€specific genes, as identified by comparative expressed sequence tag analysis. New Phytologist, 2006, 170, 753-766.	7.3	69
38	LPCAT1 controls phosphate homeostasis in a zinc-dependent manner. ELife, 2018, 7, .	6.0	63
39	Mapping QTLs for mineral accumulation and shoot dry biomass under different Zn nutritional conditions in Chinese cabbage (Brassica rapa L. ssp. pekinensis). Plant and Soil, 2008, 310, 25-40.	3.7	62
40	Quantitative trait loci and candidate genes underlying genotype by environment interaction in the response of <scp><i>A</i></scp><i>rabidopsis thaliana</i> to drought. Plant, Cell and Environment, 2015, 38, 585-599.	5.7	62
41	A transposon insertion in FLOWERING LOCUS T is associated with delayed flowering in Brassica rapa. Plant Science, 2015, 241, 211-220.	3.6	55
42	Genome-Wide Identification, Cloning and Functional Analysis of the Zinc/Iron-Regulated Transporter-Like Protein (ZIP) Gene Family in Trifoliate Orange (Poncirus trifoliata L. Raf.). Frontiers in Plant Science, 2017, 8, 588.	3.6	55
43	Isolation of Zn-responsive genes from two accessions of the hyperaccumulator plant Thlaspi caerulescens. Planta, 2007, 225, 977-989.	3.2	54
44	Effect of prior drought and pathogen stress on <i>Arabidopsis</i> transcriptome changes to caterpillar herbivory. New Phytologist, 2016, 210, 1344-1356.	7.3	53
45	A two-element Enhancer-Inhibitor transposon system in Arabidopsis thaliana. Molecular Genetics and Genomics, 1995, 247, 555-564.	2.4	52
46	Activity of the AtMRP3 promoter in transgenic Arabidopsis thaliana and Nicotiana tabacum plants is increased by cadmium, nickel, arsenic, cobalt and lead but not by zinc and iron. Journal of Biotechnology, 2009, 139, 258-263.	3.8	52
47	Identification and functional analysis of two ZIP metal transporters of the hyperaccumulator Thlaspi caerulescens. Plant and Soil, 2009, 325, 79-95.	3.7	51
48	Genetic analysis identifies quantitative trait loci controlling rosette mineral concentrations in <i>Arabidopsis thaliana</i> under drought. New Phytologist, 2009, 184, 180-192.	7.3	51
49	Model of how plants sense zinc deficiency. Metallomics, 2013, 5, 1110.	2.4	50
50	Regulation of the adaptation to zinc deficiency in plants. Plant Signaling and Behavior, 2010, 5, 1553-1555.	2.4	49
51	Rice F-bZIP transcription factors regulate the zinc deficiency response. Journal of Experimental Botany, 2020, 71, 3664-3677.	4.8	49
52	Disaggregating polyploidy, parental genome dosage and hybridity contributions to heterosis in <i>Arabidopsis thaliana</i>. New Phytologist, 2016, 209, 590-599.	7.3	46
53	High throughput screening with chlorophyll fluorescence imaging and its use in crop improvement. Current Opinion in Biotechnology, 2012, 23, 221-226.	6.6	45
54	Functional ecological genomics to demonstrate general and specific responses to abiotic stress. Functional Ecology, 2008, 22, 8-18.	3.6	43

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55	Reciprocal cybrids reveal how organellar genomes affect plant phenotypes. Nature Plants, 2020, 6, 13-21.	9.3	40
56	Altered photosynthetic performance of a natural Arabidopsis accession is associated with atrazine resistance. Journal of Experimental Botany, 2005, 56, 1625-1634.	4.8	38
57	Multi-element bioimaging of Arabidopsis thaliana roots. Plant Physiology, 2016, 172, pp.00770.2016.	4.8	38
58	De novo transcriptome assemblies of four accessions of the metal hyperaccumulator plant Noccaea caerulescens. Scientific Data, 2017, 4, 160131.	5.3	38
59	Intragenic Recombination and Diversifying Selection Contribute to the Evolution of Downy Mildew Resistance at the RPP8 Locus of Arabidopsis. Plant Cell, 1998, 10, 1861.	6.6	37
60	Comparative transcriptome analysis of the metal hyperaccumulator Noccaea caerulescens. Frontiers in Plant Science, 2014, 5, 213.	3.6	37
61	Isolation and identification of 4-Î±-rhamnosyloxy benzyl glucosinolate in Noccaea caerulescens showing intraspecific variation. Phytochemistry, 2015, 110, 166-171.	2.9	36
62	Natural variation of YELLOW SEEDLING1 affects photosynthetic acclimation of Arabidopsis thaliana. Nature Communications, 2017, 8, 1421.	12.8	35
63	Genotypeâ€“environment interactions affecting preflowering physiological and morphological traits of<i>Brassica rapa</i>grown in two watering regimes. Journal of Experimental Botany, 2014, 65, 697-708.	4.8	34
64	Elevated expression of metal transporter genes in three accessions of the metal hyperaccumulator Thlaspi caerulescens. Plant, Cell and Environment, 2001, 24, 217-226.	5.7	33
65	A comprehensive set of transcript sequences of the heavy metal hyperaccumulator Noccaea caerulescens. Frontiers in Plant Science, 2014, 5, 261.	3.6	32
66	Characterization of natural variation for zinc, iron and manganese accumulation and zinc exposure response in Brassica rapa L.. Plant and Soil, 2007, 291, 167-180.	3.7	31
67	Low frequency of T-DNA based activation tagging in Arabidopsis is correlated with methylation of CaMV 35S enhancer sequences. FEBS Letters, 2003, 555, 459-463.	2.8	29
68	Genetic analysis of morphological traits in a new, versatile, rapid-cycling Brassica rapa recombinant inbred line population. Frontiers in Plant Science, 2012, 3, 183.	3.6	28
69	<i>Gomphrena claussenii</i>, a novel metalâ€hypertolerant bioindicator species, sequesters cadmium, but not zinc, in vacuolar oxalate crystals. New Phytologist, 2015, 208, 763-775.	7.3	28
70	Overexpression of the MYB29 transcription factor affects aliphatic glucosinolate synthesis in Brassica oleracea. Plant Molecular Biology, 2019, 101, 65-79.	3.9	28
71	Local Fitness Landscapes Predict Yeast Evolutionary Dynamics in Directionally Changing Environments. Genetics, 2018, 208, 307-322.	2.9	27
72	Transcriptional effects of cadmium on iron homeostasis differ in calamine accessions of <i>Noccaea caerulescens</i>. Plant Journal, 2019, 97, 306-320.	5.7	27

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73	Natural variation in Arabidopsis thaliana reveals shoot ionome, biomass, and gene expression changes as biomarkers for zinc deficiency tolerance. Journal of Experimental Botany, 2017, 68, 3643-3656.	4.8	26
74	Expression profiling reveals functionally redundant multipleâ€copy genes related to zinc, iron and cadmium responses in <i><scp>B</scp>rassica rapa</i>. New Phytologist, 2014, 203, 182-194.	7.3	25
75	Cadmium associates with oxalate in calcium oxalate crystals and competes with calcium for translocation to stems in the cadmium bioindicator Gomphrena claussenii. Metallomics, 2018, 10, 1576-1584.	2.4	25
76	Genetics as a key to improving crop photosynthesis. Journal of Experimental Botany, 2022, 73, 3122-3137.	4.8	25
77	Strategies to increase zinc deficiency tolerance and homeostasis in plants. Brazilian Journal of Plant Physiology, 2012, 24, 3-8.	0.5	24
78	Genomics of Adaptation Depends on the Rate of Environmental Change in Experimental Yeast Populations. Molecular Biology and Evolution, 2017, 34, 2613-2626.	8.9	24
79	Intra-specific variation in zinc, cadmium and nickel hypertolerance and hyperaccumulation capacities in Noccaea caerulescens. Plant and Soil, 2020, 452, 479-498.	3.7	23
80	What drives plant stress genes?. Trends in Plant Science, 2003, 8, 99-102.	8.8	22
81	Dynamics of Adaptation in Experimental Yeast Populations Exposed to Gradual and Abrupt Change in Heavy Metal Concentration. American Naturalist, 2016, 187, 110-119.	2.1	22
82	Gomphrena claussenii, the first South-American metallophyte species with indicator-like Zn and Cd accumulation and extreme metal tolerance. Frontiers in Plant Science, 2013, 4, 180.	3.6	21
83	Comparison of two ecotypes of the metal hyperaccumulator Thlaspi caerulescens (J. & C. PRESL) at the transcriptional level. Protoplasma, 2010, 239, 81-93.	2.1	20
84	Comparative transcriptomics â€" model species lead the way. New Phytologist, 2006, 170, 199-201.	7.3	19
85	Expression of HMA4 cDNAs of the zinc hyperaccumulator Noccaea caerulescens from endogenous NcHMA4 promoters does not complement the zinc-deficiency phenotype of the Arabidopsis thaliana hma2hma4 double mutant. Frontiers in Plant Science, 2013, 4, 404.	3.6	19
86	Natural variation of photosynthetic efficiency in <i><scp>Arabidopsis thaliana</scp></i> accessions under low temperature conditions. Plant, Cell and Environment, 2020, 43, 2000-2013.	5.7	19
87	33. Transposon Tagging with the En-I System. , 1998, 82, 329-338.		18
88	Whole-Genome Hitchhiking on an Organelle Mutation. Current Biology, 2016, 26, 1306-1311.	3.9	17
89	Transcriptomic profiling of Arabidopsis gene expression in response to varying micronutrient zinc supply. Genomics Data, 2016, 7, 256-258.	1.3	17
90	Transcription Profiling of the Metal-hyperaccumulator Thlaspi caerulescens (J. & C. PRESL). Zeitschrift Fur Naturforschung - Section C Journal of Biosciences, 2005, 60, 216-223.	1.4	15

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91	Genetic Analysis of Health-Related Secondary Metabolites in a Brassica rapa Recombinant Inbred Line Population. International Journal of Molecular Sciences, 2013, 14, 15561-15577.	4.1	13
92	Identification of seed-related QTL in Brassica rapa. Spanish Journal of Agricultural Research, 2013, 11, 1085.	0.6	13
93	Spatially-resolved localization and chemical speciation of nickel and zinc in<i>Noccaea tymphaea</i>and<i>Bornmuellera emarginata</i>. Metallomics, 2019, 11, 2052-2065.	2.4	12
94	Arabidopsis thaliana and Thlaspi caerulescens respond comparably to low zinc supply. Plant and Soil, 2008, 306, 85-94.	3.7	10
95	Biofumigation using a wild Brassica oleracea accession with high glucosinolate content affects beneficial soil invertebrates. Plant and Soil, 2015, 394, 155-163.	3.7	10
96	Genetic analysis of the effect of zinc deficiency on Arabidopsis growth and mineral concentrations. Plant and Soil, 2012, 361, 227-239.	3.7	9
97	Photosynthetic response to increased irradiance correlates to variation in transcriptional response of lipidâ€remodeling and heatâ€shock genes. Plant Direct, 2018, 2, e00069.	1.9	9
98	QTL and candidate genes associated with leaf anion concentrations in response to phosphate supply in Arabidopsis thaliana. BMC Plant Biology, 2019, 19, 410.	3.6	9
99	Signals of speciation within Arabidopsis thaliana in comparison with its relatives. Current Opinion in Plant Biology, 2012, 15, 205-211.	7.1	7
100	Natural variation in phosphorylation of photosystem II proteins in <i>Arabidopsis thaliana</i> : is it caused by genetic variation in the STN kinases?. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130499.	4.0	7
101	Variation in cadmium accumulation and speciation within the same population of the hyperaccumulator Noccaea caerulescens grown in a moderately contaminated soil. Plant and Soil, 2022, 475, 379-394.	3.7	7
102	Quantification of spatial metal accumulation patterns in Noccaea caerulescens by X-ray fluorescence image processing for genetic studies. Plant Methods, 2021, 17, 86.	4.3	6
103	Nicotianamine Secretion for Zinc Excess Tolerance1. Plant Physiology, 2014, 166, 751-752.	4.8	5
104	FLC and SVP Are Key Regulators of Flowering Time in the Biennial/Perennial Species Noccaea caerulescens. Frontiers in Plant Science, 2020, 11, 582577.	3.6	5
105	Multimodal synchrotron X-ray fluorescence imaging reveals elemental distribution in seeds and seedlings of the Znâ€"Cdâ€"Ni hyperaccumulator<i>Noccaea caerulescens</i>. Metallomics, 2022, 14, .	2.4	5
106	Prior Biological Knowledge Improves Genomic Prediction of Growth-Related Traits in Arabidopsis thaliana. Frontiers in Genetics, 2020, 11, 609117.	2.3	4
107	Isotopic signatures reveal zinc cycling in the natural habitat of hyperaccumulator Dichapetalum gelonioides subspecies from Malaysian Borneo. BMC Plant Biology, 2021, 21, 437.	3.6	2
108	Increasing the iron and zinc contents of plants. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2007, 146, S247-S248.	1.8	0

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109	Identification of Genes for Biofortification Genetic and Molecular Analysis of Mineral Accumulation in Arabidopsis thaliana and Other Plant Species. , 2008, , 231-251.		0